

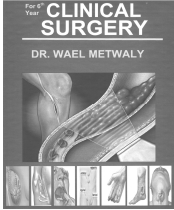
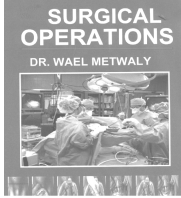
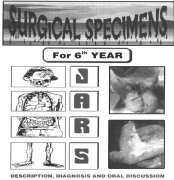
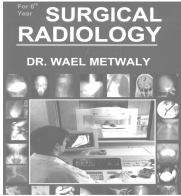
# REVISION 6

**WOUND, SHOCK, HGE**

**BLOOD TRANSFUSION**

**BURN & SURGICAL INFECTIONS**

*BY DR. WAEL METWALY*

<p>★ <b>Clinical</b></p>  <p>-----</p>	<p>★ <b>Operative</b></p>  <p>- Venous Cut down Operation</p>
<p>★ <b>Jars</b></p>  <p>-----</p>	<p>★ <b>X-rays</b></p>  <p>-----</p>

## EXAMS

- A. Written Questions
- B. Explanations

## A. WRITTEN QUESTIONS

### 1. Wound, Hge, Shock & Blood transfusion

**2001**

- Discuss **Septic Shock**. (20 Marks)
- Mention indication & complications of **Blood Transfusion**. (10 Marks)

**2002**

- Discuss **Post-hemorrhagic Shock** (10 Marks) دور ثانی
- Mention Factors affecting **Wound Healing** (12 Mark)
- Discuss priorities in management of **multi-injured patient**. (12 Mark)
- Discuss complications of **Blood Transfusion**. (12 Mark)
- Discuss aetiology , C/P of **Septic Shock**. (12 Mark)

**2003**

- Enumerate factors of abdominal wound dehiscence  
(**Burst Abdomen**) (12 Marks) دور ثانی

**2004**

- Discuss Factors affecting **Wound Healing** (20 Marks) دور ثانی

**2005**

- Discuss the aetiology, Pathophysiology & complications of  
**Septic Shock** (20 Marks) دور ثانی

**2006**

- What are the measures to keep a patent airway in a patient  
who had a **car accident** (10 Marks) دور ثانی
- In a table form Discuss the **4 Classes of Haemorrhage** (10 Marks) دور ثانی
- Discuss Aetiology & management of **Hypovolemic Shock**. (20 Marks)

**2007**

- Discuss the aetiology, Pathophysiology & complications of  
**Septic Shock** (20 Marks) دور ثانی
- Discuss Factors affecting **Wound Healing** (10 Marks)
- Discuss Detection of **wound sepsis after surgery**  
& its management (10 Marks)
- Discuss Types of **Hge** & their management. (10 Marks)
- Discuss complications of **Blood Transfusion** & their management. (10 Marks)

**2008**

- Discuss C/P of **Septic Shock**. (10 Marks)
- Discuss complications of **Blood Transfusion**. (10 Marks)

**2009**

- Discuss complications of **Blood Transfusion**. (5 Marks)
- Discuss complications of **Wound Healing** (5 Marks)
- Discuss steps of resuscitation of **Major trauma** (15 Marks)

## **2. Burn**

**2001**

- Discuss complications of **Burn**

**(10 Marks)****2002**

- Discuss complications of **Burn**  
➤ Mention fluid therapy of 30% **Burn** in adult

**(10 Marks)** دور ثانی  
**(12 Mark)**

**2003**

- What are the complications of **Burns**

**(20 Marks)****2004**

- Discuss the complications of **Major Burn** involving the upper half of the body

**(20 Marks)****2007**

- Discuss the assessment of the extent & the depth of **Burn injury**  
➤ Mention the definition & complications of **Major Burn**

**(10 Marks)** دور ثانی  
**(10 Marks)** دور ثانی

**2008**

- A 45 years old male, weighting 70 kg, sustained a flame burn in a closed room, resulting in a 30 % intermediate burn :  
**diagnosis of depth & extent, 1<sup>st</sup> aid & hospital management early & late complications & possible cause of death**
- A 70 kg, 23 years old female presented to the emergency room with a burn that affected the Ant. aspect of the Rt. Leg & the Ant. Aspect of the abdomen & chest. On examination, her vital signs were stable and locally, the burnt area was erythematous with blisters & was sensitive to pinpricking.

**(20 Marks)** دور ثانی

**How much fluids will she require in the 1<sup>st</sup> & 2<sup>nd</sup> 24 hours. (5 Marks)**

## **3. Water & Electrolytes Imbalance**

**2004**

- Enumerate causes, C/P & treatment of **Hypokalemia**

**(20 Marks)** دور ثانی**2005**

- Enumerate causes, C/P & treatment of **Hypokalemia**

**(10 Marks)**

## **4. Surgical Nutrition**

**2009**

- Female patient has stroke so she has problem in swallow.  
**What is enteric methods to nutrition you know ?**

**(10 Marks)** دور ثانی

## **5. Surgical Haemostasis**

**2005**

- Discuss **Disseminated Intravascular Coagulation (D.I.C)**

**(10 Marks)**

## **6. Surgical infections**

**1996**

- Discuss prevention of **Tetanus & Gas Gangrene**

**(10 Marks)**

**2003**

- Give a short account of **Carbuncle**

**(12 Marks)** دور ثانی

**2004**

- Discuss **post-operative wound infections**.

**(20 Marks)** دور ثانی

**2005**

- Discuss **post-operative wound infections**.
- Discuss **Carbuncle**.

**(20 Marks)** دور ثانی  
**(10 Marks)**

**2007**

- Discuss **Carbuncle**.

**(10 Marks)** دور ثانی

**2008**

- Give an account on **Antibiotics** in surgical practice.

**(15 Marks)**

## **7. Hand Infections**

**2007**

- Discuss management of **Pulp space infection**

**(5 Marks)**

## **8. Tumors**

**2003**

- Discuss Modalities of treatment of **Cancers**

**(20 Marks)**

## **9. Transplantations**

**2004**

- What are the indications of **liver Transplantation**

**(8 Marks)**

## إزای تجاوب

- ★ Motor Car Accident
- ★ Stab wound in Femoral Δ
- ★ Crush injury of The thigh

أولاً : لازم نوصف

### Wounds

- **Stab:**
  - It is caused by pointed object as Daggers
  - It is most dangerous type because internal organ or vessels may have been cut
- **Crush = Lacerated:**
  - Caused by Blunt heavy instrument
  - Marked tissue damage.
  - Less liable for bleeding
  - More liable for infection
- **Cut = Incised**
  - Caused by sharp cutting instrument
  - Little tissue damage.
  - More liable for bleeding
  - Less liable for infection

ثانياً : نكتب

## Management of multi-injured patient

### I. PRE HOSPITAL MANAGEMENT

1. Ensure of patent Airway if patient is unconscious.
2. Control of Bleeding by compression.
3. Sterile dressing to prevent Contamination.
4. Immobilize the fractured part if associated.

### II. HOSPITAL MANAGEMENT

A = Air way maintenance.

B = Breathing

- IPPB if Flail chest
- Tube in 2<sup>nd</sup> space if Pneumothorax
- Tube in 7<sup>th</sup> space if Haemothorax

**C = Circulating i.e. control bleeding.**

**D = Disability**

Any fracture must be **splinted** to decrease pain & to avoid soft tissue

**E = Exposure**

### III. **1<sup>ST</sup> AID MANAGEMENT**

#### ➤ **Anti-shock measures**

As Warmth, Oxygenation, Morphia (Except with head trauma)

Then **replacement therapy**

According to classes of Hge

1. **Class II** → Ringer's lactate **3 times** the estimated defect about 3 liters

2. **Class III or IV** → Blood transfusion **equal** the estimated defect

#### ➤ **Antibiotics**

#### ➤ **Anti-tetanic serum** There are 2 possibilities

1. **If patient received 3 doses & last one with 10 years.**

A booster dose of Tetanus Toxoid (0.5 ml IM)

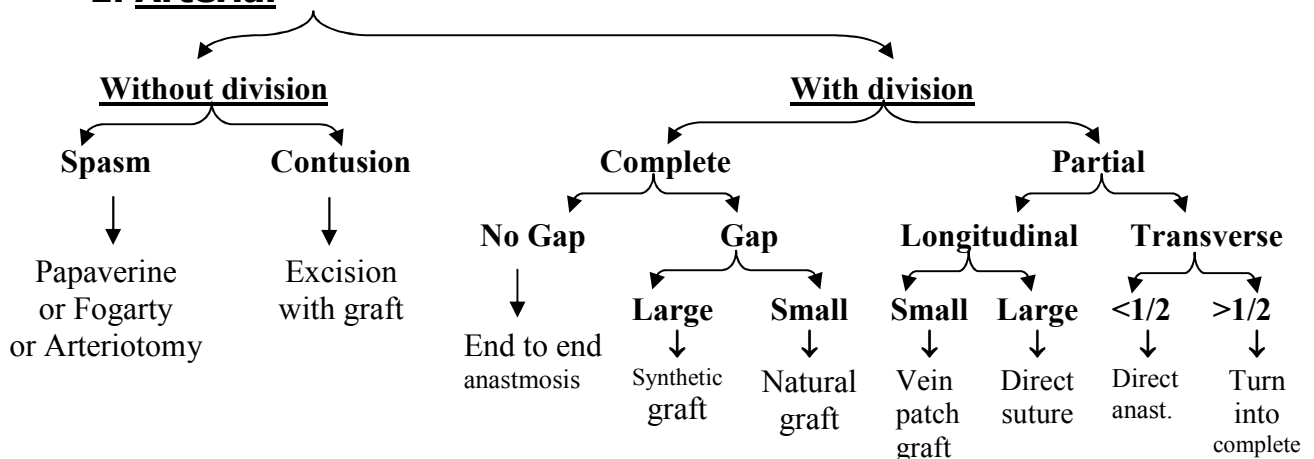
2. **If patient not previously immunized**

We start by Tetanus Toxoid (0.5 ml IM) + ITG Tetanus Immunoglobulin G

### IV. **DEFINITIVE TREATMENT**

Exploration & Fasciotomy to prevent compartmental syndrome

#### 1. **Arterial**



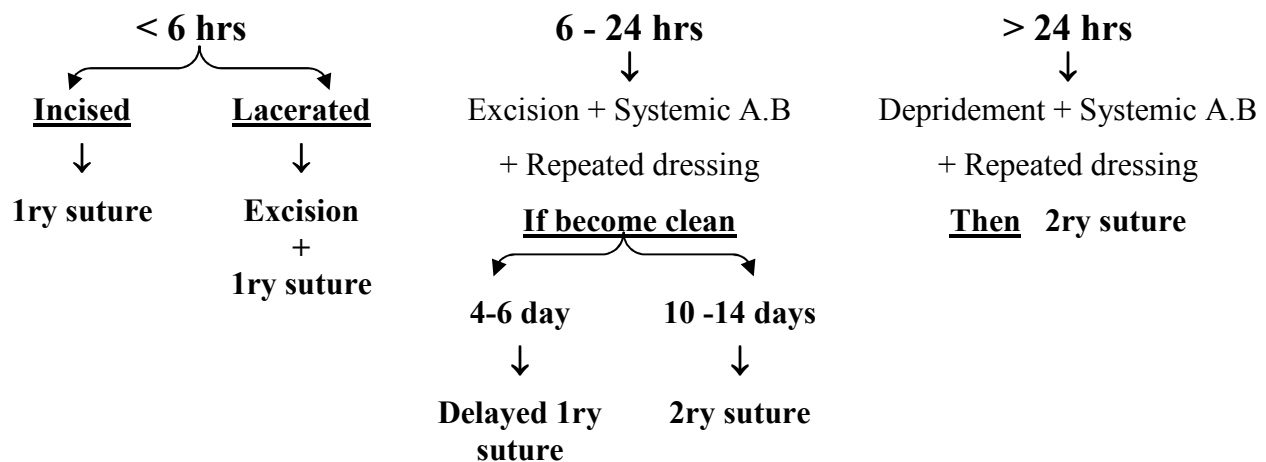
**2. Vein:** Should be repaired

**3. Nerve:** Repaired or left for another sitting

**4. Muscle & Tendon:** Are approximated

**5. Bone:** Associated Fractures must be stabilized

## 6. Skin closure (wound) According to onset of accident



## B. EXPLAIN

### THE FOLLOWING STATEMENTS



#### 1. Patient Receiving Corticosteroid are liable to wound failure

(Kasr - دور ثانی - 2005)

- As Corticosteroid Catabolic: ① ↓ fibroblast proliferation.
- ② ↑ fragility of blood vessels leading to bleeding tendency & Ischaemia of the wound
- ③ ↓ immunity leading to skin infection

#### 2. Diabetic patient are more liable to get wound infection

(Kasr - دور اول - 2005)

(Kasr - دور اول - 2006)

(Kasr - دور ثانی - 2007)

- Because of ① ↓ Cell immunity → infection
- ② Diabetic Angiopathy → Ischaemia i.e. Anaerobic infection
- ③ Peripheral Neuropathy → unaware of wound

#### 3. Patients with septic shock have a worse prognosis than those with hypovolaemic shock

(Kasr - دور ثانی - 2008)

- Because of ① No physiological response as hypovolaemic shock (تشریح)
- ② More tissue damage by Cytokines & Oxygen free radicals
- ③ Damage of barrier function of intestinal mucosa → Toxaemia

**4. A young person may loose one liter of blood , yet his/her blood pressure is unchanged**

(2005 - دور ثانی - Kasr )  
(2005 - دور اول - Kasr)

➤ Because of physiological Response by:

**a. Local factors**

1. Vasoconstriction
2. Intimal retraction
3. Clot formation

**b. General factors**

1. Neural factors
2. Endocrinal factors

**5. A young person may loose one liter of blood , yet his vital signs are stable**

(2007 - دور ثانی - Kasr )

➤ Same Answer Q: 4

**6. Patient with Massive blood transfusion may develop a bleeding tendency**

(2006 - دور ثانی - Kasr )

➤ Due to deficiency of Coagulation factors & Platelets in stored blood.

**7. Patient with liver cirrhosis have a bleeding tendency**

(2005 - دور ثانی - Kasr )

- Because of ① ↓ Coagulation factors (Prothrombin ,Fibrinogen & Factors V,VII,IX & X) which synthesized in the liver  
② ↓ Platelets if associated hypersplenism if developed Portal Hypertension  
③ ↓ Vit. K if associated obstructive jaundice if developed HCC

**8. Haemostatic defects with Liver cirrhosis**

(2007 - دور اول - Kasr)

➤ Same Answer Q: 7

**9. Patient with Disseminated Intravascular Coagulopathy may develop a bleeding tendency**

(2005 - دور ثانی - 6 Oct.)

(2006 - دور ثانی - 6 Oct.)

➤ Because of consumption of Platelets & Coagulation factors  
i.e. Consumptive Coagulopathy

**10. Patient receiving Aspirin therapy should stop it for 10 days before surgery**

(2007 - دور اول - Kasr)

➤ To avoid bleeding tendency as Aspirin inhibits Cyclo-oxygenase & Prostaglandin Synthesis thus it interfere with platelets adhesiveness.



**11. Pt. with extensive burns have a serious Catabolic status**  
(2005 – دور أول - 6 Oct.)

- As ① Temp. > 45 degree leads to protein denaturation which exceed the capacity of cellular repair .
- ② ↑ Capillary permeability leads to loss of fluid & proteins
- ③ ↑ Catabolic hormones as Catecholamine & Cortisol

**12. Pt. with extensive burns need large amount of I.V fluids for Resuscitation**

- Same Answer Q: 11

(2005 – دور أول - Kasr)  
(2006 – دور أول - Kasr)  
(2007 – دور ثانی - Kasr)

**13. Post-operative Fever** (2008 – دور ثانی - Kasr)

- Because of ① D.V.T
- ② Chest infection
- ③ Wound infection

**14. The proper treatment of terminal pulp space infection is early drainage.**

(2006 – دور أول - Kasr)

- To avoid ① destruction of fine nerves
- ② thrombosis of terminal digits & gangrene

**15. Patient Receiving Anti-rejection drugs may develop Neoplasms**  
(2005 – دور ثانی - Kasr)

- Because of ① May produce Abnormal Proteins in (the tissues or the blood Stream)  
e.g. Skin cancer or Lymphoma.
- ② May produce Abnormal W.B.Cs from bone marrow → Leukemia

تم بحمد الله

**GOOD LUCK**

**Dr. WAEL**